

NEW STUDY CONFIRMS DANGERS OF PLAYING ON ARTIFICIAL TURF

A new study into the chemicals and gasses released in sunlight by artificial turf and the potential dangers they pose to athletes and others who play on it, has been published in the scientific journal *Helihon* on the website www.cell.com. It is quite dense with scientific language, but is worth the read. Here are several salient quotes:

- “Artificial turf or synthetic grass releases hazardous substances such as heavy metals, polycyclic aromatic hydrocarbons (PAHs), and volatile organic compounds (VOCs).”
- “Recent studies...have proved the potential hazards induced by artificial turf sport fields due to the release of heavy metals, polycyclic aromatic hydrocarbons (PAHs), and volatile organic compounds (VOCs), which are defined and categorized as carcinogenic, mutagenic, bioaccumulative and toxic substances. Moreover, rubber in synthetic turf may develop heritable genetic damage and induce cancer by inhalation.”
- “The potential exposure routes to the emitted turf components include inhalation [of the] off-gassed volatile chemicals of rubber, ingestion of crumb rubber created from the breakdown of rubber and dermal uptake of chemicals contained in crumb rubber which contact the skin.”
- “At 2016, the Norwegian Environment Agency estimated the impact of artificial turf on human health and the environment. The agency analyzed samples of artificial turf for polycyclic aromatic hydrocarbons...and heavy metals...They found high levels of volatile organic compounds in the atmosphere of the fields which used artificial turf.”
- “The USA Center for Disease Control and Prevention (CDC)...issued general recommendations for users to minimize any potential risk, such as wash aggressively hand and body after playing, avoiding eating and drinking on the field and not to use clothes and shoes after the activity for normal life.”
- “United States Environmental Protection Agency (USEPA) have raised concerns regarding potential human health and environmental risks associated with the presence of and potential exposures to artificial turf.”

The full study can be found here:

[https://www.cell.com/heliyon/pdf/S2405-8440\(23\)02135-7.pdf](https://www.cell.com/heliyon/pdf/S2405-8440(23)02135-7.pdf)